

Quick Test Description

Quick Test is divided into seven specialized tests:

1. Key On Engine Off (KOEO) On-Demand Self Test
2. Key On Engine Running (KOER) On-Demand Self Test
3. Retrieve/Clear Continuous DTCs
4. KOEO Injector Electrical Self Test
5. KOEO Output State Self Test
6. KOER Switch Self Test
7. KOER Cylinder Contribution Self Test

All seven are described below.

Quick Test checks the integrity and function of the EEC-V Powertrain Control system and outputs the test results upon demand. Quick Test also provides a quick end check of the powertrain control system and is usually performed at the start of each diagnostic procedure. It is also performed at the end of most pinpoint tests for verification of repair and to make sure no other faults were incurred while servicing a previous fault.

All self tests are completely menu driven in the New Generation Star (NGS) Tester.

Note: Retrieving Continuous DTCs must be performed separately from KOEO Quick Test.

Key On Engine Off On-Demand Self Test Description

Key On Engine Off (KOEO) On-Demand Self Test is a functional test of the powertrain control system performed on demand with the key on and engine off. A fault has to be present at the time of testing for the KOEO self test to detect the fault (with the exception of IDM codes). When a fault is detected, a diagnostic trouble code (DTC) will be output on the data link when requested by a scan tool.

Key On Engine Running On-Demand Self Test Description

Key On Engine Running (KOER) On-Demand Self Test is a functional test of the powertrain control system performed on demand with the engine running and vehicle stopped. The PCM performs injection control pressure (ICP) and exhaust back pressure (EBP) system performance check. During this test, engine rpm will be elevated, the PCM will command ICP high then low and will command EBP high then low. DTCs will be displayed.

Retrieve/Clear Continuous DTCs

The Continuous Self Test is also a test of the powertrain control system. When this test detects a fault, a DTC will be stored in PCM memory. The DTC can be retrieved at a later time even if the fault no longer exists. This capability makes Continuous Self Test valuable when diagnosing intermittent faults.

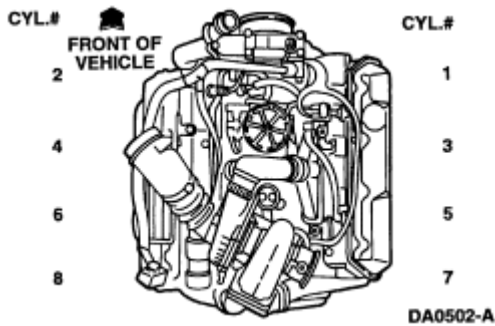
As part of Quick Test, the technician retrieves DTCs that may have been stored in continuous memory. When using an NGS Tester, it is possible to select RETRIEVE/CLEAR CONTINUOUS DTCs in the NGS Tester Diagnostic Data Link.

During most diagnostic procedures in this manual, it is required that all DTCs be retrieved. It is necessary to use the NGS Tester diagnostic test mode. Refer to [Retrieve/Clear Continuous DTCs](#) in this section for further details.

KOEO Injector Electrical Self Test

KOEO Injector Electrical Self Test determines if the injector solenoids and valves are operating by buzzing and providing fault codes and audible feedback. DTCs will be output and displayed in KOEO On-Demand Self Test mode. All injectors will buzz together for approximately 2 seconds then each injector will buzz for about 1 second in numerical order (1 through 8).

7.3L DI Engine, Cylinder and Fuel Injector Location



Note: Special instructions required to clear IDM trouble codes.

- Key on.
- Record IDM trouble codes stored in KOEO ON-DEMAND SELF TEST and KOEO INJECTOR ELECTRICAL SELF TEST modes.
- Access RETRIEVE/CLEAR CONTINUOUS DTCs from NGS Tester menu to clear IDM trouble codes from memory.
- Push CLEAR ALL button on NGS Tester.
- IDM trouble codes are now cleared from memory.

KOER Cylinder Contribution Self Test

KOER Cylinder Contribution Self Test determines if all cylinders are contributing equally to engine performance. The PCM will test the cylinders in order (1 through 8). This test consists of two portions. The first portion of the test checks for a non-contributing cylinder; the second portion of the test is a four-cylinder test that detects a weak cylinder. Engine rpm will change for each test. A non-contributing or low power cylinder will have little effect on idle quality during this test. DTCs will be displayed at the end of the test.
